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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,331	04/05/2005	Manabu Suhara	OHA-017	4700

32628 7590 11/07/2007

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EXAMINER	
KALAFUT, STEPHEN J	

ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
11/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/530,331	SUHARA ET AL.	
	Examiner	Art Unit	
	Stephen J. Kalafut	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4-10* is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05 April 2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Odakawa (JP 2002-184,402).

Odakawa discloses a cathode material $Li_{\alpha}(Ni_{1-x-y}Co_xM_y)O_{\beta}F_{\gamma}$, where Mn is one element suitable as M, $0.05 \leq x \leq 0.35$, $0.01 \leq y \leq 0.20$, $0 \leq \alpha \leq 1.1$, $1.9 < \beta < 2.1$, and $0.002 \leq \gamma \leq 0.10$. Thus, the present "y" would correspond to "x" in the Odakawa formula, while the present "q" would correspond to "γ" in the Odalawa formula. The present materials would thus fall into or overlap those of Odakawa. Any recited properties would inherently accrue. These claims are in product-

by-process formula, and are thus examined for the characteristics of the product, which would be the same as in Odakawa, absent a showing that the present process imparts characteristics to the materials not present in the prior art. See MPEP 2113 and the cases cited therein.

Claims 1-3 are rejected under 35 U.S.C. 102(a) and (e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kang *et al.* (US 2004/0091779).

Kang *et al.* disclose a material of the formula $Li_{1+x}Ni_{\alpha}Mn_{\beta}Co_{\gamma}M'_{\delta}O_{2-z}F_z$, where x is between 0 and 0.3, α and β are both between 0.2 and 0.6, γ is between 0 and 0.3, δ is between 0 and 0.15, and z is between 0 and 0.2. As seen in the formulas shown in figures 3 through 17, δ and z may each equal zero, with α, β and γ adding up to 1. Thus, the present "x" corresponds to "α" of Kang *et al.*, while the present "y" corresponds to their "γ". The present materials would thus fall into or overlap those of Kang *et al.* Any recited properties would inherently accrue. These claims are in product-by-process formula, and are thus examined for the characteristics of the product, which would be the same as in Kang *et al.*, absent a showing that the present process imparts characteristics to the materials not present in the prior art. See MPEP 2113 and the cases cited therein.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of copending Application No. 10/535,855. Although the conflicting claims are not identical, they are not patentably distinct from each other because the materials of present claims would fall into the formula recited by claim 1 of the '855 application, which is $Li_pNi_xMn_{1-x-y}Co_yO_{2-q}F_q$, each coefficient corresponding to the respective present coefficient, where $0.98 \leq p \leq 1.07$, $0.3 \leq x \leq 0.5$, $0.1 \leq y \leq 0.38$, and $0 \leq q \leq 0.05$. The difference between the present claims and those of the '855 application is thus one of overlapping ranges.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 11/150,451. Although the conflicting claims are not identical, they are not patentably distinct from each other because the materials of the present claims would fall into the formula recited by claim 1 of the

'451 application, which is $Li_pNi_xCo_yMn_zM_qO_{2-a}F_a$, each coefficient corresponding to the respective present coefficient, except where the present "q", which corresponds to "a" in the formula of the '451 application, where $0.9 \leq p \leq 1.1$, $0.2 \leq x \leq 0.8$, $0 \leq y \leq 0.4$, $0 \leq z \leq 0.5$, $y+z>0$, $0 \leq q \leq 0.05$, $1.9 \leq 2-a \leq 2.1$, $x+y+z+q=1$, and $0 \leq a \leq 0.02$. The present formula lacks the fourth metal "M", and thus corresponds to the formula of the '451 application, where "q" of that formula is zero. The difference between the present claims and those of the '855 application is thus one of overlapping ranges.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 4-10 are allowed. The prior art cited either herein or by applicants does not disclose the materials of the formula recited in claim 6, which includes an oxyhydroxide group, or the present methods of making the claimed materials. The claims of the above-noted applications also do not recite these materials or methods.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fukuzawa *et al.* (US 6,613,479) disclose a lithium-deficient manganese oxyfluoride cathode material. The IDS of 05 April 2005 is noted, but the cited references have not been received, and thus have been crossed out on the PTO-1449.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sjk

STEPHEN KALAFUT
PRIMARY EXAMINER
GROUP 1700